

**SYSTEM AND METHOD FOR HOLE FILLING**  
**IN 3D MODELS**

**ABSTRACT OF THE DISCLOSURE**

5           A method for hole-filling in 3D models includes  
identifying vertices adjacent to hole boundaries in a mesh  
of points on a digital image and constructing a signed  
distance function based on vertices adjacent to hole  
boundaries. A Radial Basis Function is fit based on the  
10       constructed signed distance function and evaluated on a  
grid, which include the hole. The points on the hole  
surface are extracted and meshed to fill the hole.